CLAIMS

What is claimed is:

1   1.   A handheld device for taking an image of an object comprising:

2   a camera module capable of focusing on and generating an electronic image signal

3   corresponding to an image of the object;

4   a motion sensor for sensing movement of said camera module and for generating a

5   movement signal indicative of the movement of said camera module; and

6   a transmitting means for transmitting the electronic image signal and the movement

7   signal to a processing engine.

2.   The handheld device of claim 1, further comprising a processing engine

receiving the electronic image signal and the movement signal from the transmitting means,

and for processing the electronic image signal in response to the movement signal to correct

the image signal for movement of said camera module, and for combining a plurality of

corrected image signals into an electronic image output signal corresponding to a single image

of the object.

1   3.   The handheld device of claim 1, wherein said motion sensor is capable of

2   detecting movement of said camera module in at least two dimensions.

1   4.   The handheld device of claim 3, wherein said motion sensor is capable of

2   detecting movement of said camera module in three dimensions.

1   5.   The handheld device of claim 4, wherein said motion sensor comprises a

2 accelerometer.

1   6.   The handheld device of claim 4, wherein said motion sensor comprises a

2 gyroscope.

1   7.   The handheld device of claim 2, wherein said motion sensor is capable of

2 detecting movement of said camera module in three dimensions.

1   8.   The handheld device of claim 2, further comprising a memory for storing a

2 plurality of electronic image signals corresponding to a plurality of images of the object.

       9.   The handheld device of claim 2, wherein said processing engine is capable of

2 combining a plurality of corrected image signals corresponding to a plurality of images taken

3 of different portions of the object.

       10.   The handheld device of claim 2, wherein said processing engine is capable of

2 combining a plurality of corrected image signals corresponding to a plurality of images taken

3 of the object to result in a signal capable of producing an image of a higher quality than any of

4 the single images.

1   11.   The handheld device of claim 2, wherein said handheld device is a mobile

2 phone.

1   12.   The handheld device of claim 1 in combination with a processing engine located

2   remotely from the handheld device, said processing engine receiving the electronic image

3   signal and the movement signal from the transmitting means, and for processing the electronic

4   image signal in response to the movement signal to correct the image signal for movement of

5   said camera module, and for combining a plurality of corrected image signals into an electronic

6   image output signal corresponding to a single image of the object.

1   13.   The handheld device of claim 12, wherein said handheld device is a mobile

2   phone.

1   14.   A method for obtaining an image of an object with a handheld device containing

2   a camera module and a motion sensor, said method comprising:

3   taking a plurality of images of the object with the camera module to generate an

4   electronic image signal corresponding to each of the plurality of images taken;

5   storing the plurality of electronic image signals;

6   sensing movement of the camera module between the taking with the camera module of

7   the plurality of images of the object;

8   generating a plurality of movement signals which are indicative of sensed movement of

9   the camera module;

10   processing each of the plurality of electronic image signals in response to the movement

11   signals to correct for movement of the camera module to generate a plurality of corrected

12   electronic image signals; and

13   combining the plurality of corrected electronic image signals into an electronic output

14   signal corresponding to a single image of the object.

1   15.   The method of claim 14, wherein movement of the camera module in at least

2   two dimensions is sensed.

1   16.   The method of claim 15, wherein movement of the camera module in three

2   dimensions is sensed.

1   17.   The method of claim 14, wherein storing the plurality of electronic image

2   signals, processing each of the plurality of electronic image signals, and combining the

3   plurality of corrected electronic image signals is performed by the handheld device.

        18.   The method of claim 17, wherein the handheld device is a mobile phone.

1   19.   The method of claim 14, wherein storing the plurality of electronic image

2   signals, processing each of the plurality of electronic image signals, and combining the

3   plurality of corrected electronic image signals is performed by a processor remote from the

4   handheld device.

1   20.   The method of claim 14, wherein in said combing step, a plurality of corrected

2   image signals corresponding to a plurality of images taken of different portions of the object

3   are combined.

1   21.   The method of claim 14, wherein in said combing step, a plurality of corrected

2   image signals corresponding to a plurality of images taken of the object are combined to result

3   in a signal capable of producing an image of a higher quality than any of the single images.

1   22.   The method of claim 14, further comprising displaying on a display of the

2   handheld device an image in response to the electronic image output signal.

1   23.   The method of claim 14, further comprising transmitting the electronic image

2   output signal to a display remote from the handheld device and displaying on the display an

3   image in response to the electronic image output signal.